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JOHN J. BORG

NOTE ON THE MIGRATION OF THE SHORT-TOED EAGLE
CIRCAETUS GALLICUS (GMELIN, 1788)
OVER THE MALTESE ISLANDS, CENTRAL MEDITERRANEAN

SUMMARY

Regular monitoring of raptor autumn migration by Birdlife Malta has been ongoing since the early 1970s mainly at Buskett, a small woodland on the central-western side of Malta and to a lesser extent from Nadur Tower, Dwejra, Malta. While species such as Honey Buzzards *Pernis apivorus* and Marsh Harriers *Circus aeruginosus* have been subject to a small number of local studies various other raptor species have not been covered. This note aims at highlighting the autumn migration period over open water in the central Mediterranean, the age of birds involved in these movements and the recent sightings of concentrations of migrating Short-toed Eagles over the Maltese Islands.

Key-words: Migration, open water, Autumn, Maltese Islands.

RIASSUNTO

Dagli anni '70 del Novecento ha avuto luogo un regolare monitoraggio della migrazione autunnale dei Rapaci da parte di Birdlife Malta, soprattutto a Buskett, un piccolo boschetto nella parte centro-occidentale di Malta, e in minor misura dalla Nadur Tower, Dwejra, Malta. Mentre specie come il Falco pecchiaiolo *Pernis apivorus* e il Falco di palude *Circus aeruginosus* sono state oggetto di un piccolo numero di studi locali, varie altre specie di Rapaci non hanno ancora ricevuto la necessaria attenzione. Questa nota ha lo scopo di mettere in evidenza la migrazione autunnale attraverso il mare aperto del Biancone *Circaetus gallicus* nel Mediterraneo centrale, l'età degli individui osservati durante questi movimenti migratori e le recenti osservazioni di concentrazioni di individui in transito nelle isole Maltesi.

Parole chiave: Biancone, Migrazione, mare aperto, autunno, Isole Maltesi.

INTRODUCTION

The Short-toed Eagle *Circaetus gallicus* (Gmelin, 1788) is a Palearctic migrant. Generally, it does not migrate in flocks, but concentrations may

occur at short sea crossings. Most migrants winter in tropical Northern Africa, from Southern Mauritania and Senegambia to Ethiopia. Exceptionally it also winters in Southern Europe, North Africa and Middle East; a small number winter in the coastal regions of South and East Iberia (review in ORTA *et al.*, 2018). Most leave Europe from mid-September to mid-October but overall passage period is from August to November, returning mainly from March and the first half of April with the overall migration period starts from late February and carried on to early May. Main arrival of adults at the Strait of Gibraltar takes place during first half of March but spring passage there is very prolonged, with some immatures arriving as late as June and July. Might occasionally over-summer in sub-Saharan Africa. However, young birds move north as far as northwest Africa and Iberia to spend the summer (ORTA *et al.*, 2018).

Birds gather at crossing points: the main route between Africa and Europe is the Strait of Gibraltar, with a secondary route via the Sicilian Channel, island hopping from Cap Bon in Tunisia onwards towards the Egadi Islands and over the mountain ranges of northern Sicily finally crossing the Straights of Messina and northwards towards Central Europe and *vice versa*, though two juveniles satellite-tracked from southern Italy moved north then west to cross at Gibraltar (MELLONE *et al.* 2011); birds moving between Africa and Asia fly over the Gulf of Suez, with Central European breeders continuing via Western Israel (at least in autumn, where a maximum of 8,045 were counted in 1986) and the Bosphorus, with only small numbers moving further east of this route, e.g. through Jordan, and numbers taking the East Black Sea route are not large according to AGOSTINI *et al.* (2002), MELLONE *et al.* (2016), and ORTA *et al.* (2018).

One satellite-tracked individual migrated from France to Mali, taking one month to complete the journey, moving at an average speed of 135 km/day (overall distance 4045 km); it had an overall winter range of 410 km²; another moved further on, to Niger, taking 20 days to cover 4685 km (mean 234 km/day), and moved significantly longer distances on days with good weather (MEYBURG *et al.*, 1998). In an European context, birds wandered (in both spring and autumn) north to Norway, Sweden (60+ records), Denmark, the Low Countries (occasionally multiple, long-staying individuals) and South West England (ORTA *et al.*, 2018).

Migration over the Central Mediterranean

AGOSTINI *et al.*, (2002, 2004) and AGOSTINI & MELLONE (2008) suggested a circular migration for the Italian population of Short-toed Eagles, where individuals breeding in central Italy fly north and head west towards the Iberian Peninsula, crossing the Mediterranean at the Straits of Gibraltar. However, MASSA *et al.* (2015) pointed out that numerous observations over

the Egadi islands, off the west coast of Sicily, in particular the island of Marettimo, suggest that part of the population crosses the Mediterranean hopping from Sicily on to the Egadi islands and on to north Africa. The same applies for the spring migrants, albeit in smaller numbers. In April 2022, while on Lampedusa Island, Pelagian Islands, Sicily, the author observed two adult birds on the 2nd and 5th respectively, the latter was continuously being mobbed by a female Montagu's Harrier *Circus pygargus*.

In the Maltese Islands, the Short-toed Eagle is a scarce autumn migrant recorded mainly from mid-September (one record in August) to mid-October, occasionally in November, with one record of two birds reported in December (SULTANA & GAUCI, 1982; BirdLife Malta databank, 1967-2022). It has never been recorded during the spring migration (SULTANA *et al.*, 1975; SULTANA & GAUCI, 1982). SCHEMBRI (1843) and WRIGHT (1864) both listed it as rare and irregular, reporting single birds in August. DE LUCCA (1969) regarded it as accidental with several recorded from August to November.

Short-toed Eagles have never been recorded in the Maltese Islands between the months of January and July but FENECH (2010) mentions 5 birds on 4 July 2006 and 3 on the following day. Fenech also reports the only spring sighting of this species in Malta with one bird allegedly seen on 22 April 2005. Fenech's records were mainly based on second-hand reports from bird hunters and trappers, therefore these records could not be confirmed, and for this study they were not taken into consideration.

MATERIAL & METHODS

Systematic observations have been carried out daily from a vantage point overlooking Wied il-Luq and Buskett Gardens on the western side of Malta since the early 1970s. From the late 1980s Nadur Tower, Dwejra, situated along the Victoria Lines and in a straight north line from Buskett, has also been regularly monitored. Observations were carried out mostly from late mornings to one hour after sunset, starting from the latter half of August up to mid-November, although times and extreme days (August and November) may vary by a few days from one year to the next. As a result of these observations one finds several published studies such as those by AGOSTINI *et al.* (1999, 2001, 2002, 2004), BEAMAN & GALEA (1974), GALEA & MASSA (1985), THAKE (1976, 1977, 1978, 1978a, 1980, 1980a, 1981, 1981-1983, 1981-1983a, 1982, 1984-1985, 1986-1987, 1992-1994). The results presented here are based on sightings reported in the BirdLife Malta databank and on twenty specimens present in the collections of the National Museum of Natural History, Mdina, Malta.

RESULTS

Sightings from the Maltese Islands

The autumn raptor peak migration period over the Maltese Islands is usually from mid-September to mid-October, but Short-toed Eagles are normally recorded from late September through October, occasionally in November. A total of 124 sightings containing 328 individuals have been recorded over 55-year period (1967 to 2022). Annual sightings average from one to three birds, but in some instances up to 11 sightings were recorded (SULTANA *et al.*, 1975; SULTANA & GAUCI, 1982; BirdLife Malta databank 1982-2022). This study shows that from 1967 to 2022, a total of 96 observations consisted of single birds (67% of all sightings), while 17 observations consisted of two birds together or two different birds seen in one day (13%), the remaining 20% of the observations showed numbers ranging from 3 to 50 birds either in loose numbers or in flocks (Fig. 1).

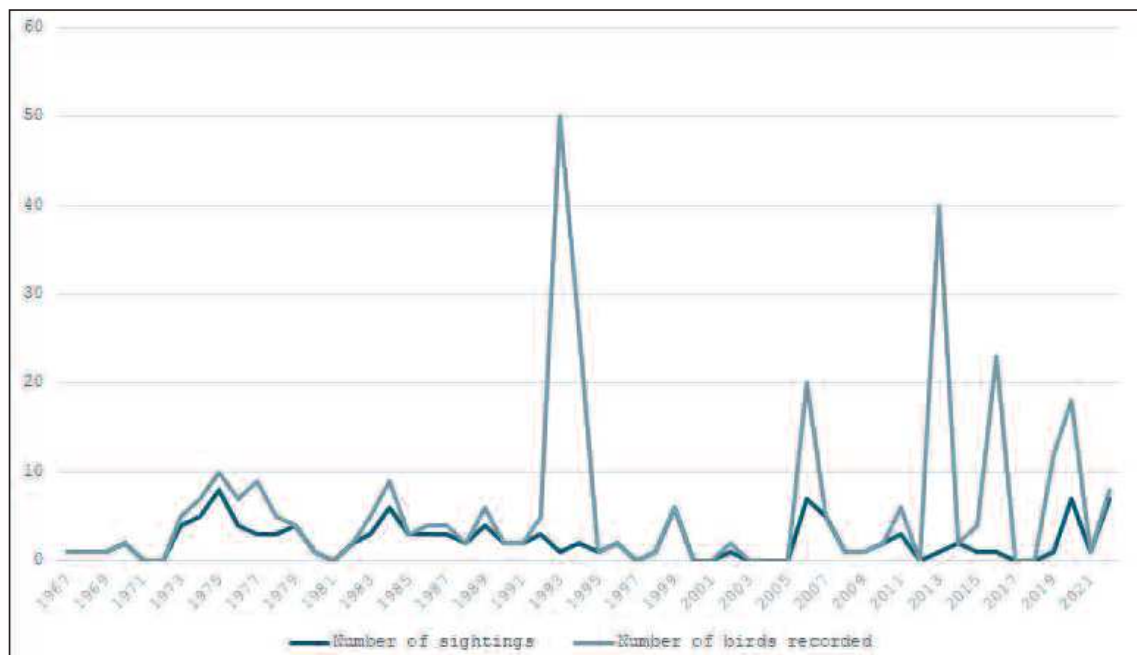


Fig. 1 — Total number of sightings and the numbers of birds reported from each sighting over a 55-year period.

Monthly Sightings

September produced the highest number of observations with a total of 57 sightings, but only 74 birds were recorded, there were 45 sightings in October but with a total of 109 birds recorded. There were fewer observations in November with only 14 records, but on the other hand, this month produced the highest numbers, with 136 birds logged. One bird was

recorded in August and one record with two birds was recorded in December (Table 1).

	Aug	Sept	Oct	Nov	Dec	Total
Monthly Observations	1	57	52	14	1	125
Number of birds recorded	1	74	126	136	2	339

Table 1.

Monthly observations and totals of birds seen from 1967 to 2021.

Flock Migration

Up to 1982, no large flocks were ever recorded, and the highest number of birds seen in one day was of 7 birds (SULTANA & GAUCI, 1982). The first record of a flock of birds in the Maltese Islands was recorded on 10th November 1999 from Dwejra Ridge where twenty-nine birds were observed (COLEIRO, 1999). In the following years, there were seven other instances where flocks of Short-toed Eagles were reported with numbers ranging from 12 to 14 birds (Table 2). In recent years, particularly in the 2016 sighting, 40+ Booted Eagles *Aquila pennata*, a very rare visitor to the Maltese islands, were accompanying a flock of 23 Short-toed Eagles.

Locality	Date	Number of birds in flock
north Malta	10.11.1993	50
Buskett	23.10.2013	40
Dwejra Ridge	10.11.1999	29
Ghajn Tuffieha	29.11.1994	25
Buskett	1.11.2016	23
Airport	3.11.2006	14
Buskett	2.11.2019	12
Victoria, Gozo	8.10.2020	12

Table 2.

Observations of flocks of Short-toed Eagle over the Maltese Islands.

Age groups

According to AGOSTINI *et al.* (2004), it is mainly the juvenile birds that make the long sea crossings (Fig. 2). This appears to be trend here as most specimens forming part of the collections at the National Museum of Natural History, Mdina belong to juvenile birds. Of the 20 specimens of Short-toed Eagles, 15 were juvenile birds, 4 sub-adults and only one adult bird.



Fig. 1 — A juvenile Short-toed Eagle photographed on Malta.

CONCLUSION

Although this species is on the decline (BIRDLIFE INTERNATIONAL, 2000), it is interesting to note an increase in numbers of birds seen since the 1990s. Considering this decline, one wonders why numbers observed in the Maltese Islands have been on the increase and what triggered this change. It may be possible that a small number of birds remain in southern Europe particularly in the south of Italy and in Sicily and on the approach of inclement weather they congregate in flocks and are forced to cross the Mediterranean. It is also worth mentioning the increase in the number of individuals as well as observations of Booted Eagles over the Maltese Islands in the last decade (*pers. obs.*), this increase in sightings coincide with the increase in the number of wintering individuals on nearby Sicily (MASSA *et al.*, 2015; *pers. obs.*, 2020-2022).

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Author's address – J.J. BORG, National Museum of Natural History, St. Publius Square, Mdina, MDN1011 MALTA; email: john.j.borg@gov.mt